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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application: H. Hansen, et al.

Serial No.:

Filed: (herewith)

Art Unit:

Examiner:

Title: TELEPHONE CALL/VOICE PROCESSING SYSTEM

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D. C. 20231

Dear Sir:

Please amend the above identified patent application as follows:

CERTIFICATION UNDER 37 C.F.R. § 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as Express mail in an envelope addressed to Assistant Commissioner for Patents, Washington, D.C. 20231, on March 13, 2001.

Signature

Toni Stanley

(Printed name of person certifying)

IN THE CLAIMS

(1) Please cancel Claims 4-5, 7-11, 14-15, 17, 21, 23, 28-34, 36-37, 40-42, 44-45, 48-57, and 62-68.

(2) Please rewrite Claim 1 as follows:

1 1. (Amended) A telephone call and voice processing system comprising:
 2 switching circuitry [adaptable] for receiving a call, wherein the switching circuitry [is
 3 adaptable for connecting] connects the call to a telecommunications device coupled to the
 4 system; and
 5 voice processing circuitry [adaptable] for automatically interacting with the call, wherein
 6 the switching circuitry and the voice processing circuitry are controlled by [a single processing
 7 means] not more than one microprocessor.

(3) Please rewrite Claim 2 as follows:

1 2. (Amended) The system as recited in claim 1, wherein the voice processing circuitry
 2 further comprises a signal processing circuitry coupled to the one microprocessor [single
 3 processing means].

(4) Please rewrite Claim 3 as follows:

1 3. (Amended) [The system as recited in claim 2] A telephone call and voice processing
 2 system comprising:
 3 switching circuitry for receiving a call, wherein the switching circuitry connects the call
 4 to a telecommunications device coupled to the system; and
 5 voice processing circuitry for automatically interacting with the call, wherein the
 6 switching circuitry and the voice processing circuitry are controlled by a single processing
 7 means, wherein the voice processing circuitry further comprises a signal processing circuitry

8 coupled to the single processing means, wherein the switching circuitry further comprises a
9 digital cross-point matrix coupled to the single processing means and to the signal processing
10 circuitry.

(5) Please rewrite Claim 6 as follows:

1 6. (Amended) [The system as recited in claim 1] A telephone call and voice processing
2 system comprising:

3 switching circuitry for receiving a call, wherein the switching circuitry connects the call
4 to a telecommunications device coupled to the system; and

5 voice processing circuitry for automatically interacting with the call, wherein the
6 switching circuitry and the voice processing circuitry are controlled by a single processing
7 means, wherein the single processing means is controlled by a single set of software operable for
8 controlling both the switching circuitry and the voice processing circuitry.

(6) Please rewrite Claim 12 as follows:

1 12. (Amended) [The system as recited in claim 2] A telephone call and voice processing
2 system comprising:

3 switching circuitry for receiving a call, wherein the switching circuitry connects the call
4 to a telecommunications device coupled to the system; and

5 voice processing circuitry for automatically interacting with the call, wherein the
6 switching circuitry and the voice processing circuitry are controlled by a single processing
7 means, wherein the voice processing circuitry further comprises a signal processing circuitry
8 coupled to the single processing means, wherein the signal processing circuitry further includes:
9 a DTMF receiver operable for recognizing DTMF tones from the call.

(7) Please rewrite Claim 13 as follows:

1 13. (Amended) [The system as recited in claim 2] A telephone call and voice processing
2 system comprising:

3 switching circuitry for receiving a call, wherein the switching circuitry connects the call
4 to a telecommunications device coupled to the system; and

5 voice processing circuitry for automatically interacting with the call, wherein the
6 switching circuitry and the voice processing circuitry are controlled by a single processing
7 means, wherein the voice processing circuitry further comprises a signal processing circuitry
8 coupled to the single processing means, wherein the signal processing circuitry further includes:

9 a recording buffer operable for recording the call.

(8) Please rewrite Claim 16 as follows:

1 16. (Amended) [The system as recited in claim 2] A telephone call and voice processing
2 system comprising:

3 switching circuitry for receiving a call, wherein the switching circuitry connects the call
4 to a telecommunications device coupled to the system; and

5 voice processing circuitry for automatically interacting with the call, wherein the
6 switching circuitry and the voice processing circuitry are controlled by a single processing
7 means, wherein the voice processing circuitry further comprises a signal processing circuitry
8 coupled to the single processing means, wherein the signal processing circuitry further includes:

9 a call processing tone generator operable for generating and transmitting to the call
10 standard call processing tones.

(9) Please rewrite Claim 18 as follows:

1 18. (Amended) The system as recited in claim 1, further comprising circuitry operable
2 for recording all or a portion of the call after the telecommunications device is connected to the
3 call.

(10) Please rewrite Claim 27 as follows:

1 27. (Amended) [The system as recited in claim 25] A telephone call and voice
2 processing system comprising:
3 switching circuitry for receiving a call, wherein the switching circuitry connects the call
4 to a telecommunications device coupled to the system;
5 voice processing circuitry for automatically interacting with the call, wherein the
6 switching circuitry and the voice processing circuitry are controlled by a single processing
7 means;
8 circuitry for listening to a voice signal at a telephone extension coupled to the system;
9 circuitry for activating a recording sequence to record the voice signal; and
10 circuitry for storing the recorded voice signal in a digital memory, wherein the activating
11 circuitry is tactically initiated by a user of the telephone extension, wherein the voice signal
12 originated from a voice mail message stored in the system.

(11) Please rewrite Claim 58 as follows:

1 58. (Amended) In a telephone call and voice processing system comprising switching
2 circuitry [adaptable] for receiving a call, wherein the switching circuitry connects [is adaptable
3 for connecting] the call to a telecommunications device coupled to the system, and voice
4 processing circuitry [adaptable] for automatically interacting with the call, wherein the switching
5 circuitry and the voice processing circuitry are controlled by a single processing means[.], a
6 method comprising the steps of:
7 listening to a voice signal at a telephone extension coupled to the system;

8 activating a recording sequence to record the voice signal; and

9 storing the recorded voice signal in a memory.

(12) Please add new Claim 69 as follows:

1 69. A telephone call and voice processing system comprising:

2 switching circuitry for receiving a call, wherein the switching circuitry connects the call
3 to one of a plurality of telecommunications devices coupled to the system; and

4 voice processing circuitry for automatically interacting with the call, wherein the
5 switching circuitry and the voice processing circuitry are controlled by a single microprocessor.

(13) Please add new Claim 70 as follows:

1 70. A telephone call and voice processing system comprising:

2 switching circuitry for receiving a call, wherein the switching circuitry connects the call
3 to one of a plurality of telecommunications devices coupled to the system; and

4 voice processing circuitry for automatically interacting with the call, wherein the
5 switching circuitry further comprises a digital cross-point matrix.

(14) Please add new Claim 71 as follows:

1 71. A telephone call and voice processing system comprising:

2 switching circuitry for receiving a call, wherein the switching circuitry connects the call
3 to a telecommunications device coupled to the system;

4 voice processing circuitry for automatically interacting with the call, wherein the
5 switching circuitry and the voice processing circuitry are controlled by a single processing
6 means;

7 circuitry for listening to a voice signal at a telephone extension coupled to the system;

8 circuitry for activating a recording sequence to record the voice signal; and

9 circuitry for storing the recorded voice signal in a digital memory.

(15) Please add new Claim 72 as follows:

1 72. A telephone call and voice processing system comprising:
2 switching circuitry for receiving a call, wherein the switching circuitry connects the call
3 to a telecommunications device coupled to the system;
4 voice processing circuitry for automatically interacting with the call, wherein the
5 switching circuitry and the voice processing circuitry are controlled by a single processing
6 means; and
7 circuitry for permitting a user of a telephone coupled to the system to monitor a voice
8 mail message while the message is being recorded into the user's mailbox.

REMARKS

The present application is a continuation of U.S. Application Serial No. 08/873,215. The claims in this continuation application are essentially the same claims that stood rejected in Serial No. 08/873,215, and have hereby been filed for further prosecution on the merits. The following remarks are in response to the rejections of some of these claims made in Paper No. 21 of Serial No. 08/873,215.

I. REJECTION UNDER 35 U.S.C. § 112

In Paper No. 21, the Examiner rejected claims 1-2 and 71 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. In response, Applicants respectfully traverse. The Examiner has asserted that it is not clear as to the definite intent of the phrase "controlled by", where the Examiner has asserted that there clearly is control provided by other than the described one microprocessor. This may be true, but the claim is reciting that the signal processing circuitry is controlled by the not more than one microprocessor. The claim as written

does not preclude control functions being performed by other circuitry, such as the signal processing circuitry, just that the voice processing circuitry and the switching circuitry are controlled by not more than one microprocessor. Disclosing that the signal processing circuitry has some control functionality is not at odds with the claim, and thus the claim is not indefinite.

The Examiner then goes on to state that because there is a DSP, there is control by more than one microprocessor again causing confusion as to what is intended by the phrase "controlled by." In response, again Applicants assert that claim 1 does not preclude other circuitry from providing some type of control functionality, and that this does not result in an inconsistency within the teachings of the present invention, and also does not result in an indefiniteness in the language of claim 1. Furthermore, a DSP is not a microprocessor, contrary to the Examiner's assertion. A microprocessor is the physical realization of the central processing unit of a given computer system on either a single chip of semiconductor or on a small number of chips. Dictionary of Electronics, E.C. Young, second edition, page 349. A digital signal processor is a specialized digital microprocessor that performs calculations on digitized signals that were originally analog (e.g. voice) and then sends the results on. Newton's Telecom Dictionary, Harry Newton, sixteenth edition, page 257. A microprocessor does not operate on analog signals, whereas a DSP does, and therefore it is accepted within the art that a DSP is not the same as a microprocessor.

With respect to claim 2, Applicants have amended claim 2 as requested by the Examiner in Paper No. 21.

II. REJECTIONS UNDER 35 U.S.C. § 102

In Paper No. 21, the Examiner rejected claim 71 under 35 U.S.C. § 102(b) as being anticipated by *Sharma, et al.* (U.S. Patent No. 5,452,289.) In response, Applicants respectfully traverse this rejection. As the Examiner is well aware, for a claim to be anticipated under § 102, each and every element of the claim must be found within the cited prior art reference.

Applicants have added new Claim 69 (which is the same as claims 71) which recites that the switching circuitry connects a call to one of a plurality of telecommunications devices coupled to the system. This capability is not in any way taught or suggested within *Sharma*, since *Sharma* merely provides that a single telecommunications device coupled to codec 305 is connected to an incoming call into telephone line interface 309. Note that the plurality of telecommunications devices 301-304 cannot be referred to as such a plurality recited within Claim 69, since *Sharma* quite clearly states that these are alternative interfaces connected to the codec circuit 305. Column 8, lines 18-24. Thus, *Sharma* teaches that a user may use, in the alternative, any one of the telephone handset 301, the telephone headset 302, or the microphone 303 and speaker 304, but *Sharma* does not teach that there is any switching capability to connect an incoming call to any one of the three.

Claims 3, 6, 12-13, 16, 18-20, 24-27, 58-60 and 73 stood rejected under 35 U.S.C. § 102(b) as being anticipated by *Daly, et al.* (U.S. Patent No. 5,274,738) in Paper No. 21. In response, Applicants respectfully traverse that rejection. Claim 1 recites that the switching circuitry receives a call and connects the call to a telecommunications device coupled to the system. The Examiner has asserted that *Daly* teaches such telecommunications devices by items 22a-22b, etc. The Examiner then goes on to further assert that the TDM chip 44 is the same as the digital cross-point matrix. Because of the Examiner's characterization of how *Daly* teaches claim 3, Applicants respectfully assert that it is therefore impossible for *Daly* to teach all of the limitations of claim 3, since a call is not received by TDM chip 44. All that TDM chip 44 does is to receive requests from the telecommunications devices 22a, et al. for voice processing functionality provided within chip 14. Nowhere within *Daly* is it taught or suggested that a call is received by chip 14, and specifically TDM chip 44, and then connected to any one of devices 22a, et al.

Furthermore, TDM chip 44 is not the same as a digital cross-point matrix which is well defined in the art as not being the same as a circuit that performs a time division multiplexing operation, which is what TDM chip 44 does. Time division multiplexing is a technique for

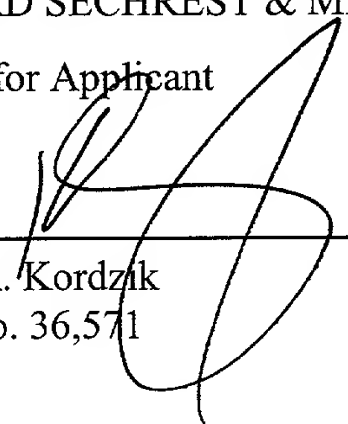
transmitting a number of separate data, voice and/or video signals simultaneously over one communications medium by quickly interleaving a piece of each signal one after another. Newton's Telecom Dictionary, Harry Newton, sixteenth edition, page 863. In contrast, a cross-point switch is an array of cross-points wherein one of N inputs is selectively connected to one of M outputs. *See* U.S. Patent No. 5,060,192, col. 1, lines 9-11. *See also* U.S. Patent No. 4,360,809 for another disclosure on a cross-point switch. Therefore, since *Daly* does not teach or suggest such a cross-point switch, *Daly* cannot anticipate any of the rejected claims.

As a result of the foregoing, Applicants respectfully assert that all the claims in the application are allowable.

Respectfully submitted,

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